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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,999	09/30/2003	Jessica L. Voss-Kehl	58227US002	5245

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EXAMINER

PENG, KUO LIANG

ART UNIT PAPER NUMBER

1712

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/674,999	<b>Applicant(s)</b> VOSS-KEHL ET AL.	
	<b>Examiner</b> Kuo-Liang Peng	<b>Art Unit</b> 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 10/13/05 Amendment.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5,8-26,32-41,43-45 and 56-59 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,8-26,32-41,43-45 and 56-59 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. The Applicants' amendment filed on October 13, 2005 was received.

Claims 1, 8-9, 16, 20 and 23 are amended. Claims 6-7, 27-31, 42 and 46-55 are deleted. Now, Claims 1-5, 8-26, 32-41, 43-45 and 56-59 are pending.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 18, 21 and 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claim 18 (line 2), "0" causes confusion because Claim 16 requires the presence of the additive.

In Claim 21 (line 20), the Markush language is improper.

In Claim 25 (line 2), "0" causes confusion because Claim 23 requires the presence of the additive.

***Claim Rejections - 35 USC § 102***

4. Claims 32-34, 36-41, 43-45 and 56-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Boulton (US 2001/0024685) as evidenced by Chen (US 6 661 408), Bottari (US 6 727 895) and Bloom (US 4 622 437).

Boulton discloses a touch activated user input device (herein after TAUID), comprising a substrate and a layer comprising polyorganosilsesquioxane and nanoparticles. (Figures, [0021], [0023], [0029] and [0034]-[0036]) The substrate can be exemplified as glass. ([0034]) Boulton does not explicitly mention about the resistive layer, conductive traces, linearization layer, etc. However, it is well known that a functional TAUID should include these features, as indicated in Chen (Figures, Abstract and col. 3, lines 11-55), Bottarie (Figures, Abstract and col. 2, line 3 to col. 3, line 54) and Bloom (col. 1, lines 17-56 and Figures). Note that the layer comprising polyorganosilsesquioxane and nanoparticles can form a hard coat and pinhole-free. Since Boulton's layer is substantially the same as that of Applicants', both should possess similar thermal stability.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-5, 9-19, 22 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (US 6 586 104) in view of Iryo (US 5 789 476).

For Claims 1-5, 9-15, 18-19, 22 and 26, Matsuda discloses a coating composition as described in the previous Office action (Paper No. 072005), which is incorporated herein by reference. The difference between Matsuda and the present invention is the specific surface modifier of the nanoparticles set forth in the instant claims. However, Iryo teaches the use of silane compounds such as methyltrimethoxysilane, etc. for modifying nanoparticles such as oxides of titanium, silicon, zirconium, etc in a coating composition. The motivation of the modification of the nanoparticles is to improve the stability/dispersity of the nanoparticles in the coating composition. (col. 3, lines 14 to col. 4, line 11, col. 6, lines 27-67 and Examples) In light of the benefit mentioned, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Matsuda's nanoparticles according to Iryo's method. For Claims 16-17,

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note that as mentioned previously, the composition does contain methyltrialkoxysilane, etc.

7. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda in view of Chandross (US 6 251 486).

Matsuda discloses a coating composition as described in the previous Office action (Paper No. 072005), which is incorporated herein by reference. The difference between Matsuda and the present invention is the specific flexibilizer set forth in the instant claims. However, Chandross teaches the use of dialkyldialkoxysilane such as dimethyldiethoxysilane, etc. in a composition comprising polymethylsilsesquioxane. The motivation is to afford a material with enhanced properties because it can function as plasticizer segments. (Abstract, col. 2, lines 23-45, line 63 to col. 3, line 7 and col. 4, lines 1-18) In light of the benefit mentioned, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Chandross' dialkyldialkoxysilanes in Matsuda's composition.

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8. Claims 1-5, 8, 10-15, 18-19 and 22-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda (US 6 586 104) in view of Atkinson (US 4 909 852).

For Claims 1-5, 8, 10-15, 18-19, 22 and 25, Matsuda discloses a coating composition as described in the previous Office action (Paper No. 072005), which is incorporated herein by reference. The difference between Matsuda and the present invention is the specific surface modifier of the nanoparticles set forth in the instant claims. However, Atkinson teaches the use of a carboxylic acid with carbon number less than 8 or derivatives thereof for treating titanium oxide particles for using in a silicone resin coating composition. Note that the small range of the carbon number less than 8 renders obvious of hexanoic acid. The motivation of using the carboxylic acid/derivatives is to enhance the dispersity of the particles in the coating composition. (col. 5, line 12 to col. 7, line 24 and Examples) In light of the benefit mentioned, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to utilize Atkinson's carboxylic acid/derivatives to modify Matsuda's particles. For Claims 23-24, note that Mastuda in view of Atkinson's composition does contain organic acids.

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9. Claims 16-18 (when the specific additive in Claim 18 is present) are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuda in view of Rotenberg (US 4 173 490).

Matsuda discloses a coating composition as described in the previous Office action (Paper No. 072005), which is incorporated herein by reference. The difference between Matsuda and the present invention is the requirement of the specific additive set forth in the instant claims. However, Rotenberg teaches that a coating composition comprising a tetraalkoxysilane and alkyltrialkoxysilane is useful for providing abrasion coatings for plastics. The motivation of using a composition comprising these components is to increase the abrasion resistance of plastics. (Abstract, col. 1, lines 18-61 and Examples) In light of the benefit mentioned, it would have been obvious to one of ordinary skill in the art at the time of the invention was made incorporate these silanes into Matsuda's composition. Especially, Matsuda teaches the coating of a liquid crystal display (col. 2, lines 31-39) that is typically a plastic substrate.

10. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boulton in view of Vakil (US 2005/0007349).



Boulton discloses a touch activated user input device (herein after TAUID), comprising a substrate and a layer comprising polyorganosilsesquioxane and nanoparticles. Boulton further teaches conventionally a silicon alkoxide containing non-hydrolyzable organic groups has been widely used for coating a plastic substrate. ([0010]) Therefore, it would have been obvious to coat Boulton's composition (a silicon alkoxide containing non-hydrolyzable organic groups) on a plastic substrate with expected success. Boulton is silent on the specific plastic substrate to be coated. However, note that a polyethylene terephthalate (PET) is widely used for the substrate in a TAUID. For example, Vakil teaches the use of a TAUID comprising a PET substrate. ([0017] and Figures) Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to coat Boulton's composition on a PET in a TAUID with expected success.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang Peng whose telephone number is (571) 272-1091. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski, can be reached on (571) 272-1302. The

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fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

klp  
December 23, 2005

  
Kuo-Liang Peng  
Primary Examiner  
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